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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,910	02/26/2002	Hardy Wietzoreck	DNAG 224 - PFF/JRC	3826

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EXAMINER	
ZHENG, LOIS L	
ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,910	WIETZORECK ET AL.	
	Examiner	Art Unit	
	Lois Zheng	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 Feburary 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 27-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 27-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 3-26 are canceled in view of the preliminary amendment filed on 21 November 2001.

Claims 27-30 are added in view of the amendment.

Claims 1-2 and 27-30 are currently under examination.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the abstract is more than one paragraph. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidel et al. US 5,976,272(Seidel) in view of Reed US 3,939,014(Reed).

Seidel discloses a no-rinse phosphating metal substrate process with a coating solution comprising:

- 2 – 25 g/l of zinc ions (abstract, col. 2, lines 47-54, lines 58-59)
- 2 – 25 g/l of manganese ions (abstract, col. 2, lines 62-66)
- 50 – 300 g/l of phosphate ions (abstract, col. 2, lines 47-54)

With respect to claim 1 of the instant invention, Seidel fails to teach the claimed amount of zinc ions being 26 – 60 g/l.

Reed teaches an aqueous zinc phosphating solution for coating of steel for deforming(title, abstract). The zinc phosphating solution of Reed comprises 5-100g/l of zinc and 10-150g/l of phosphate(col. 4, lines 18-21).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated 5-100g/l of zinc of Reed into the coating solution of Seidel in order to achieve the rapid coating results as taught by Reed(col. 4, lines 13-17).

Furthermore, the amounts of zinc, manganese ions in the coating solution of Seidel in view of Reed overlap the claimed amounts of zinc and manganese ions(i.e. 26 – 60 g/l of zinc ion and 0.5 – 40 g/l of manganese ion) as recited in claim 1 of the instant invention. The amount of phosphate ions in the coating solution of Seidel in view of Reed encompasses the claimed phosphate amount of 50 – 300 g/l as recited in claim 1. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed Zn, Mn, and Phosphate ion ranges from the disclosed Zn, Mn, and Phosphate ion ranges of Seidel in view of Reed would have been obvious to one skilled in the art since Seidel in view of Reed teaches the same utilities in its' disclosed Zn, Mn, and Phosphate ion ranges.

With respect to claim 27 of the instant invention, Seidel's phosphating solution further comprises 0.1 – 15 g/l of nickel (col. 3, lines 3-7), which overlaps the claimed nickel amount of up to 20 g/L as recited in claim 27. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed up to 20 g/l nickel ion range from the disclosed nickel ion range of Seidel in view of Reed would have been obvious to one skilled in the art since Seidel in view of Reed teaches the same utilities in its' disclosed nickel ion range.

With respect to claim 29 of the instant invention, Seidel further discloses that the ratio of the sum of metal ions to phosphate is in the range of 1:5 – 1:6(col. 4, lines 23-26, lines 37-42, lines 50-55), which overlaps the claimed cation to phosphate ion ratio range of 1.1 – 1.8 as recited in claim 29. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed 1.1 – 1.8 cation to phosphate ion

ratio range from the disclosed ratio range of Seidel in view of Reed would have been obvious to one skilled in the art since Seidel in view of Reed teaches the same utilities in its' disclosed cation to phosphate ion range.

With respect to claim 30 of the instant invention, Seidel further discloses that the liquid film formed by Seidel's phosphating solution is in the amount of 2 – 10 ml/m^2 (col. 3, lines 52-53), which overlaps the claimed amount range of 1 – 12 ml/m^2 as recited in claim 30. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed phosphate coating amount of 2 – 10 ml/m^2 from the disclosed phosphate coating amount range of Seidel in view of Reed would have been obvious to one skilled in the art since Seidel in view of Reed teaches the same utilities in its' disclosed phosphate coating amount range.

6. Claims 1 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuyler et al. US 6,743,302(Cuyler).

Cuyler teaches a dry-in-place zinc phosphating composition for coating a metal substrate(titile, abstract). The zinc phosphating composition of Cuyler comprises:

- 53 – 400 g/l of phosphate ions (col. 4, lines 27-61, claims 1(a) and 2(a))
- zinc to phosphate ion ratio of 0.003:1.00 – 0.10:1.00 (col. 5, lines 16-31), which is equivalent to 0.159 – 40 g/l of zinc ions
- manganese to phosphate ion ratio of 0.01:1.00 – 0.7:1.00 (col. 5, lines 32-54), which is equivalent to 0.53 – 280 g/l of manganese ions

With respect to claim 1 of the instant invention, the amounts of zinc, manganese and phosphate ions in the coating solution of Cuyler overlap the claimed amounts of

zinc, manganese and phosphate ions(i.e. 26 – 60 g/l of zinc ion, 0.5 – 40 g/l of manganese ion and 50 – 300 g/l of phosphate ions as recited in claim 1). Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed Zn, Mn, and Phosphate ion ranges from the disclosed Zn, Mn, and Phosphate ion ranges of Cuyler would have been obvious to one skilled in the art since Cuyler teaches the same utilities in its' disclosed Zn, Mn, and Phosphate ion ranges.

With respect to claim 27 of the instant invention, Cuyler teaches that the coating solution further comprises nickel and the nickel to phosphate ion ratio is in the range of 0.003:1.00 – 0.05:1.00 (col. 5, line 55 – col. 6, line 11), which is equivalent to 0.159 – 20g/l. The amount of nickel in the coating solution of Cuyler overlaps the claimed nickel amount of up to 20 g/L as recited in claim 27. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed up to 20 g/l nickel ion range from the disclosed nickel ion range of Cuyler would have been obvious to one skilled in the art since Cuyler teaches the same utilities in its' disclosed nickel ion range.

With respect to claim 28 of the instant invention, Cuyler further teaches the addition of polymer to the coating solution (abstract, col. 7 line 34 – col. 10 line 27).

The phrase "in particular of N-containing heterocyclic compounds, preferably of vinyl pyrrolidones" bears no patentable weight since it is merely an example of a polymer.

With respect to claim 29 of the instant invention, the ratio of the sum of cations to phosphate ions in the solution of Cuyler overlaps the claimed range of 1:1 – 1:8. This conclusion is arrived by comparing the total amount of Zn, Mn and Ni ions to phosphate

ions for the coating solution of Cuyler. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed 1.1 – 1.8 cation to phosphate ion ratio range from the disclosed ratio range of Cuyler would have been obvious to one skilled in the art since Cuyler teaches the same utilities in its' disclosed cation to phosphate ion ratio range.

With respect to claim 30 of the instant invention, the examiner asserts that the amount range of the coating solution of Cuyler would overlap the claimed 1-12 ml/m^2 since the coating solution of Culyer is substantially similar to the coating solution of the claimed invention. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed phosphate coating amount of 2 – 10 ml/m^2 from the disclosed phosphate coating amount range of Seidel in view of Reed would have been obvious to one skilled in the art since Seidel in view of Reed teaches the same utilities in its' disclosed phosphate coating amount range.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cuyler in view of Fotinos et al. US 5,653,790(Fotinos).

The teachings of Cuyler is discussed in paragraph 6 above. Cuyler also teaches the addition of polymer to the zinc phosphate coating solution in the polymer to phosphate ion ratio amount of 0.0005:1.00 – 5:1.00 (col. 9, lines 37-54), which is equivalent to 0.0265 – 2000 g/l. Cuyler further teaches adding 0.005 – 0.15 g/l of hydrogen peroxide into the coating solution (col. 7, lines 30-31)

However, Cuyler fails to teach the claimed peroxide amount of 0.5 – 120 g/l as recited in claim 2 of the instant invention.

Fotinos discloses a zinc phosphate aqueous coating composition that utilizes 0.005 – 5 g/l of hydrogen peroxide as an accelerator (col. 3 lines 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art to have added 0.005 – 5 g/l of hydrogen peroxide as taught by Fotinos into the zinc phosphate coating solution of Cuyler in order to accelerate the coating processing as taught by Fotinos (col. 3 lines 36-42).

Furthermore, the amount of hydrogen peroxide (i.e. 0.005 – 5 g/l) as taught by Cuyler in view of Fotinos overlaps the claimed hydrogen peroxide amount of 0.5 – 120 g/l as recited in claim 2 of the instant invention. In addition, the amount of polymer in the coating solution of Cuyler encompasses claimed 0.5 – 50 g/l of polymer as recited in claim 2. . Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed hydrogen peroxide and polymer amount ranges from the disclosed ranges of Cuyler in view of Fotinos would have been obvious to one skilled in the art since Cuyler in view of Fotinos teaches the same utilities in its' disclosed hydrogen peroxide and polymer ranges.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gehmecker et al. US 4,950,339 teach a zinc phosphate coating process.

Oei, et al. GB 2,078,788 teach processes and compositions for zinc phosphating metal surfaces.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LLZ

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